Documentation Sheet

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Title Database Management Strategy of the LCA Aerodynamic Data Version 3.0 for LCA Real Time Simulation

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NAL Project No. D-8-303

Document No. PD FC 9407

Date of issue Dec., 1994

Contents 68 *Pages* 15 *Figures* 9 *Tables* 6 *References*

External Participation ---

Sponsor ---

Approval Head, Flight Mechanics & Control Division ssk

Remarks ---

Keywords Aerodynamic data, Converted data, Flight dynamic data

Abstract Management aspects of the LCA aerodynamic database and user manualof a plotting utility program developed for the database are described here.

Structure of the data supplied by the LCA aerodynamics group and that needed for software programs at NAL (linear interpolation (CALI)/linear model generation (ALLS)/ non-linear simulation (CLASS/ELS) differed. The difference arises mainly because of the real time requirement in non-linear simulation for which equipspaced data is best suited. Data being huge and complex, systematic conversion strategy has been adopted.

The complexity of the structure of data which had made it almost impossible to derive detailed physical meaning as it is, has been tamed with a user friendly package in PC-MATLAB. This package enables the user to plot any of the aerodynamic coefficients or their derivatives as function of any independent variable with another independent variable as a parameter.